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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,357	02/06/2006	Kazuhito Tanaka	P29233	1320

52123   7590   12/09/2010
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EXAMINER
JOSEPH, DENNIS P

ART UNIT	PAPER NUMBER
2629	

NOTIFICATION DATE	DELIVERY MODE
12/09/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
pto@gbpatent.com

	Application No.	Applicant(s)
	10/567,357	TANAKA ET AL.
Office Action Summary	Examiner	Art Unit	
	DENNIS P. JOSEPH	2629	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 January 2010</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-11,13,14 and 16-26</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-11,13,14 and 16-26</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>06 February 2006</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☒ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This Office Action is responsive to amendments filed for application No. 10/567,357 on

January 27, 2010. Claims 1-11, 13, 14 and 16-26 are pending and have been examined.

Continued Examination

2.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on January 27, 2010 has been entered.

Specification

3.   The title of the invention is not descriptive. A new title is required that is clearly

indicative of the invention to which the claims are directed, such as the latch failure detection

process.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   **Claim 1, 2, 5-7, 13-18, and 20-24** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Kubota et al. (US 6,288,699 B1).

For **claim 1,** Kubota teaches a clock signal generator that generates a clock signal (Kubota,

column 8, lines 1-2). Kubota teaches the use of a clock signal, therefore there must be a clock

signal generator. Kubota also teaches a phase adjusting device that adjusts the phase of the clock

signal (Kubota, column 9, lines 39-53). Kubota also teaches a test signal generator (Kubota,

column 9, lines 39-53). Kubota teaches generating detecting signals which are the same as test

signals. Kubota also teaches a serial data generator that generates serial data according to an

image to be displayed (Kubota, column 7, lines 19-26, and figure 1). Kubota teaches a signal

video data line (RGB signal) which is then used to generate a signal video data line (DAT). The

use of a single line implies serial data.

Kubota does not specifically teach a latch failure detector that includes a "latcher that latches the

test signal generated by said test signal generator to detect the presence/absence of a latch failure

in said data driver based on an output signal from said latcher".

However, Kubota teaches a phase adjusting circuit meant to correct the phase difference between

the data and the clock. This phase difference is the cause of a latch failure; therefore detecting a

phase difference in the phase adjusting circuit is the same as detecting a latch failure and wherein

the phase adjustment of the clock signal is only made if a phase of the serial data and the phase

of the clock signal differ at least a predetermined amount such that a latch failure is detected

(Kubota, column 9, lines 39-53, figure 1). Respectfully, the difference is semantics as to summarize, Kubota also is concerned with differences in the phase difference between the signals. Therefore, the signals MON1 and MON2 are used to detecting an internal delay and there is further a delay detecting circuit for determining the phase difference between these signals, (Kubota, Column 9, Lines 38-52). These two signals could be interpreted reasonably as being the claimed test signals and based on the results of the phase difference, it is obviously determined if an adjustment needs to be made (indicative of a failure). At this point, the phase adjustment section makes the appropriate correction. Please note that Kubota has several disclosures about the data driving circuitry, with the associated latches, so it is obvious that the interpreted test signals are measuring signals across these latches.

Kubota does not teach a plurality of discharge cells, based on a drive pulse.

However, such a feature is obvious, if not inherent, in a display system and the pulses/driving circuitry for this is commonly known in the art. Several KSR principles can be applied here, such as well known technique (because it is obvious that a drive pulse is required to drive the cells/pixels), simple substitution of parts (given that being able to add or manipulate circuitry to do this is a simple modification) and obvious to try (given that it is commonly used in the art to the point where it would actually be obvious to one of skill to do this to get predictable results/benefits).

Therefore, it would be obvious to one of ordinary skill in the art, at the time of the invention, to implement the drive pulsing technique with the motivation of the KSR principles above.

For **claim 2,** Kubota teaches a data driver that includes a plurality of data driver units (Kubota, figure 4).

For **claim 5,** Kubota teaches adjusting the phase of the clock signal at predetermined intervals (Kubota, column 14, lines 30-34).

For **claim 6,** Kubota teaches a phase adjusting period at intervals of a plurality of fields (Kubota, figure 10).

For **claim 7,** Kubota teaches that the phase adjustment period could include a plurality of adjustment periods (Kubota, column 11, lines 25-31). Kubota does not specifically state that the phase adjustment device would continue from the beginning of the next period; however, the examiner takes official notice that it is well known that if the phase adjustment devices are not finished in one adjustment period then it will continue from the beginning of the next period because the phase adjustment does complete without breaks in-between. The examiner also takes official notice that a Phase Locked Loop (PLL) will adjust the phase of a signal in multiple periods and the phase adjustment will continue from the beginning of the next period if it did not finish and it is well known in the art. It would have been obvious to one of ordinary skill in the art to modify Kubota's system with the known technique of the phase adjustment device would

continue from the beginning of th next period since this would allow for the phase adjustment to
be completed faster.

For **claim 13,** Kubota teaches a buffer in the device (Kubota, figure 1). It would have been
obvious to use the buffer for the clock signal as well. Kubota also teaches a plurality of delay
elements that sequentially delay said clock signal by a predetermined delay amount (Kubota,
column 3 line 61 - column 4 line 6). Kubota also teaches a selector that selectively outputs a
plurality of clock signals (Kubota, column 11, lines 5-24, and figure 7).

For **claim 14,** Kubota teaches a delay circuit (Kubota, figure 1 and 13, column 3, lines 61-67). It
would have been obvious to add more delay circuits (or reuse the same delay circuit) if one
wanted delay circuits with different number of delay amounts since such a modification may
only require a mere addition or replication of the delay section. Kubota also teaches selecting
delay circuit and providing clock signal to the circuit (Kubota, figure 1, item 12).

For **claim 16,** Kubota teaches a phase adjusting device that can detect that the phase of the
adjusted clock signal is the optimal phase and finish the adjustment of the phase of the clock
signal when it is detected that the phase of the clock signal is the optimal phase (Kubota, column
9, lines 39-53). Kubota teaches adjusting the phase to an optimum value; therefore the device
must be able to detect the optimal phase.

For **claim 17,** Kubota teaches adjusting the phase of the clock to an optimum value which it has

calculated (Kubota, column 9, lines 39-53). Therefore, it would have been obvious that in order

to adjust the phase to an optimal value, the device must have the optimal value stored since it

was not provided the optimal value from an external source. Kubota also teaches adjusting the

phase when it does not affect the image display (Kubota, column 5, lines 46-58). Therefore, it

would have been obvious to do so in the write period.

For **claim 18,** Kubota teaches adjusting the phase of the clock to an optimum value which it has

calculated (Kubota, column 9, lines 39-53). Therefore, it would have been obvious that in order

to adjust the phase to an optimal value, the device must have the optimal value stored since it

was not provided the optimal value from an external source. Kubota also teaches that the phase

adjustment may take longer than one adjustment period (Kubota, column 11, lines 25-31).

For **claim 20,** Kubota teaches adjusting the phase of the clock with respect to the serial data

(Kubota, column 4, lines 15-22, and figure 7 and 14).

For **claim 21,** Kubota teaches adjusting the phase of the clock to an optimum value; therefore the

device must be able to detect the optimal phase of the clock (Kubota, column 9, lines 39-53).

Kubota also teaches adjusting the phase of the video signal (Kubota, column 4, lines 11-14).

Therefore, it would have been obvious to adjust the phase of the video signal when the clock

signal is optimal.

For **claim 22,** Kubota teaches adjusting the phase to an optimum value which it has calculated

(Kubota, column 9, lines 39-53). Therefore, it would have been obvious that in order to adjust

the phase to an optimal value, the device must have the optimal value stored since it was not

provided the optimal value from an external source. Kubota also teaches adjusting the phase of

either the video data or the clock (Kubota, column 4, lines 7-21). It is obvious that Kubota could

store the phase of both clock and video data since both can be adjusted to an optimal phase.

Kubota teaches adjusting the phase when it does not affect the image display (Kubota, column 5,

lines 46-58). Therefore, it would have been obvious to do so in the write period.

For **claim 23,** Kubota teaches adjusting the phase to an optimum value which it has calculated

(Kubota, column 9, lines 39-53). Therefore, it would have been obvious that in order to adjust

the phase to an optimal value, the device must have the optimal value stored since it was not

provided the optimal value from an external source. Kubota also teaches adjusting the phase of

either the video data or the clock (Kubota, column 4, lines 7-21). It is obvious that Kubota could

store the phase of the both clock and video data since both can be adjusted to an optimal

phase. Kubota teaches adjusting the phase when it does not affect the image display (Kubota,

column 5, lines 46-58). Therefore, it would have been obvious to do so in the write period. It

also would have been obvious to use the last optimal value that was stored since no new value

was detected. This is so because if no new value was detected then the memory should still

contain the last optimal value.

For **claim 24,** Kubota teaches adjusting the phase when it does not affect the image display

(Kubota, column 5, lines 46-58). Therefore, it would have been obvious to set it to a sustain

period during which light emitting of the discharge cell selected in said write period is sustained.

For **claim 25,** Kubota teaches a clock signal generator that generates a clock signal (Kubota,

column 8, lines 1-2). Kubota teaches the use of a clock signal, therefore there must be a clock

signal generator. Kubota also teaches a phase adjusting device that adjusts the phase of the clock

signal (Kubota, column 9, lines 39-53). Kubota also teaches a test signal generator (Kubota,

column 9, lines 39-53). Kubota teaches generating detecting signals which are the same as test

signals. Kubota also teaches a serial data generator that generates serial data according to an

image to be displayed (Kubota, column 7, lines 19-26, and figure 1). Kubota teaches a signal

video data line (RGB signal) which is then used to generate a signal video data line (DAT). The

use of a single line implies serial data.

Kubota does not specifically teach a latch failure detector that includes a "latcher that latches the

test signal generated by said test signal generator to detect the presence/absence of a latch failure

in said data driver based on an output signal from said latcher" and to further emphasize on it,

how this relates to the phase adjustor limitation which claims "said latch failure being detected

when a width of a latch failure non-occurrence region is larger than a predetermined threshold."

However, Kubota teaches a phase adjusting circuit meant to correct the phase difference between

the data and the clock. This phase difference is the cause of a latch failure; therefore detecting a

phase difference in the phase adjusting circuit is the same as detecting a latch failure and wherein

the phase adjustment of the clock signal is only made if a phase of the serial data and the phase

of the clock signal differ at least a predetermined amount such that a latch failure is detected

(Kubota, column 9, lines 39-53, figure 1). Respectfully, the difference is semantics as to

summarize, Kubota also is concerned with differences in the phase difference between the

signals. Therefore, the signals MON1 and MON2 are used to detecting an internal delay and

there is further a delay detecting circuit for determining the phase difference between these

signals, (Kubota, Column 9, Lines 38-52). These two signals could be interpreted reasonably as

being the claimed test signals and based on the results of the phase difference, it is obviously

determined if an adjustment needs to be made (indicative of a failure). At this point, the phase

adjustment section makes the appropriate correction. Please note that Kubota has several

disclosures about the data driving circuitry, with the associated latches, so it is obvious that the

interpreted test signals are measuring signals across these latches. Furthermore, since the

difference between MON1 and MON2 are being compared by delay detecting circuit, there is, as

noted above, a determination made to see if there needs to be a phase adjustment, meaning that

the failure/difference had to be greater than a predetermined threshold.

Kubota does not teach a plurality of discharge cells, based on a drive pulse.

However, such a feature is obvious, if not inherent, in a display system and the pulses/driving

circuitry for this is commonly known in the art. Several KSR principles can be applied here, such

as well known technique (because it is obvious that a drive pulse is required to drive the

cells/pixels), simple substitution of parts (given that being able to add or manipulate circuitry to

do this is a simple modification) and obvious to try (given that it is commonly used in the art to

the point where it would actually be obvious to one of skill to do this to get predictable

results/benefits).

Therefore, it would be obvious to one of ordinary skill in the art, at the time of the invention, to

implement the drive pulsing technique with the motivation of the KSR principles above.

For **claim 26,** Kubota teaches a clock signal generator that generates a clock signal (Kubota,

column 8, lines 1-2). Kubota teaches the use of a clock signal, therefore there must be a clock

signal generator. Kubota also teaches a phase adjusting device that adjusts the phase of the clock

signal (Kubota, column 9, lines 39-53). Kubota also teaches a test signal generator (Kubota,

column 9, lines 39-53). Kubota teaches generating detecting signals which are the same as test

signals. Kubota also teaches a serial data generator that generates serial data according to an

image to be displayed (Kubota, column 7, lines 19-26, and figure 1). Kubota teaches a signal

video data line (RGB signal) which is then used to generate a signal video data line (DAT). The

use of a single line implies serial data.

Kubota does not specifically teach a latch failure detector that includes a "latcher that latches the

test signal generated by said test signal generator to detect the presence/absence of a latch failure

in said data driver based on an output signal from said latcher" and to further emphasize on it,

how this relates to the phase adjustor limitation which claims "said latch failure being detected

when a width of a latch failure non-occurrence region is larger than a predetermined threshold."

However, Kubota teaches a phase adjusting circuit meant to correct the phase difference between

the data and the clock. This phase difference is the cause of a latch failure; therefore detecting a

phase difference in the phase adjusting circuit is the same as detecting a latch failure and wherein

the phase adjustment of the clock signal is only made if a phase of the serial data and the phase

of the clock signal differ at least a predetermined amount such that a latch failure is detected

(Kubota, column 9, lines 39-53, figure 1). Respectfully, the difference is semantics as to

summarize, Kubota also is concerned with differences in the phase difference between the

signals. Therefore, the signals MON1 and MON2 are used to detecting an internal delay and

there is further a delay detecting circuit for determining the phase difference between these

signals, (Kubota, Column 9, Lines 38-52). These two signals could be interpreted reasonably as

being the claimed test signals and based on the results of the phase difference, it is obviously

determined if an adjustment needs to be made (indicative of a failure). At this point, the phase

adjustment section makes the appropriate correction. Please note that Kubota has several

disclosures about the data driving circuitry, with the associated latches, so it is obvious that the

interpreted test signals are measuring signals across these latches. Furthermore, since the

difference between MON1 and MON2 are being compared by delay detecting circuit, there is, as

noted above, a determination made to see if there needs to be a phase adjustment, meaning that

the failure/difference had to be greater than a predetermined threshold.

Kubota does not teach a plurality of discharge cells, based on a drive pulse.

However, such a feature is obvious, if not inherent, in a display system and the pulses/driving

circuitry for this is commonly known in the art. Several KSR principles can be applied here, such

as well known technique (because it is obvious that a drive pulse is required to drive the

cells/pixels), simple substitution of parts (given that being able to add or manipulate circuitry to

do this is a simple modification) and obvious to try (given that it is commonly used in the art to

the point where it would actually be obvious to one of skill to do this to get predictable

results/benefits).

Therefore, it would be obvious to one of ordinary skill in the art, at the time of the invention, to

implement the drive pulsing technique with the motivation of the KSR principles above.

6.   **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota et al. (US

        6,288,699 B1) in view of Haines (US 4,697,107).

For **claim 3,** Kubota does not teach an open drain output.

However, in the same field of endeavor, Haines teaches a plurality of latches with open-drain

outputs (Haines, column 3, lines 31-36). Haines also teaches a plurality of wired-OR

connections for those latches (Haines, column 3, lines 37-56).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Kubota's phase adjustment with Haines's control circuit because open-drain

outputs and wired-OR connections can simplify the circuit by requiring fewer components.

7.   **Claim 4, 8 and 10-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over

        Kubota et al. (US 6,288,699 B1) in view of Saito (US 20010054924 A1).

For **claim 4,** Kubota does not teach alternating the test signal pulse every clock period; however,

in the same field of endeavor, Saito teaches the test signal as an alternating pulse signal that is

inverted every period of the clock (Saito, page 2, paragraph [0015]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Kubota's phase adjustment with Saito's test signal because using a test

signal that alternates every period could improve the accuracy of the phase adjustment by

allowing the adjustment to occur more frequently.

For **claim 8,** Kubota teaches a latch failure detector that generates a latch failure detection signal

indicating the presence/absence of the latch failure, based on a first test signal obtained by

delaying said test signal and second test signal obtained by delaying said test signal (Kubota,

column 4, lines 1-6 & lines 54-59, column 10 lines 26-32). It would have been obvious to delay

the test signals block clock periods because this would have been a simply way to accurately

delay the signals by a set period of time. Kubota teaches a detection section that detects the

phase difference and a phase adjusting section that adjusts the phase according to an instruction

sent from the detection section based on the result of the detection section. Kubota also teaches

using two detection signals to detect the phase difference between the two. Kubota does not

teach using the exclusive logical sum of the detection signals; however, in the same field of

endeavor, Saito teaches taking the logical sum of delay control signals used to adjust the phase of

a signal (Saito, figure 6). It would have been an obvious matter of design choice to take the

exclusive logical sum because such a modification would only require a mere change of the logic

gate used.

For **claim 10,** Kubota teaches a detection unit that notifies the phase adjusting unit to adjust the

phase of a signal (Kubota, column 10, lines 26-31). Kubota does not teach a holder for the

detection result.

However in the same field of endeavor, Saito teaches holding the result of the detection (Saito,

page 3, paragraph [0041]). Saito also teaches flip-flop circuits to hold control signals (Saito,

page 6, paragraph [0084]). It is well known in the art that flip flop have reset inputs to reset the

flip flop.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Kubota with Saito because it could improve the accuracy of the phase

adjustment.

For **claim 11,** Kubota teaches a detection unit that notifies the phase adjusting unit to adjust the

phase of a signal (Kubota, column 10, lines 26-31). Kubota does not teach a holder for the

detection result; however in the same field of endeavor, Saito teaches holding the result of the

detection (Saito, page 3, paragraph [0041]). Saito also teaches flip-flop circuits to hold control

signals (Saito, page 6, paragraph [0084]). It is well known in the art that flip flop have reset

inputs to reset the flip flop. It is also obvious to have a reset signal generating circuit if one

chose to use the reset input of a flip flop because it is necessary to generate a reset signal to reset

a flip flop.

For **claim 12,** Saito teaches outputting the detection result from the signal phase detection circuit

to a variable delay circuit (Saito, figure 1). Therefore, it is obvious that the result of the phase

detection is delayed.

8.   **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota et al. (US

        6,288,699 B1) in view of Saito (US 20010054924 A1), and Takuwa (US 5,793,363).

For **claim 9,** Kubota teaches latch failure detector generates a plurality of latch failure detection

signals obtained by sequentially delaying said latch failure detection signal by a predetermined

delay amount to generate a logical product of said plurality of latch failure detection signals

(Kubota, column 4, lines 1-21, 45-61).

Kubota does not specifically teach a logical product.

However, in the same field of endeavor, Takuwa teaches using the logical product of a latch

output (Takuwa, column 7, lines 56-60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Kubota's latch failure detector with Takuma's latch output because the

addition of using a logical product could simply the circuitry by requiring less wire to be used,

since the output of a logical product can be carried on a single transmission wire.

9.   **Claim 19** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota et al. (US

        6,288,699 B1) in view of Someya et al. (US 6,924,796 B1)

For **claim 19,** Kubota does not teach setting the phase to the center of a range; however, in the

same field of endeavor, Someya teaches detecting a range of valid phases and selects the midway

phase as the optimum phase (Someya, column 12, lines 54-63, and abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Kubota's phase adjustment with Someya's phase detection because all deal

with displays and the addition of Someya might improve the image quality by setting the phase

to a center of valid phases.

Response to Arguments

10.   Applicant's arguments considered, but are respectfully moot.

Applicant is thanked for the interview to discuss this case with the previous examiner. To be honest, while this new examiner is not sure what took place in that interview, it seems that the claim amendments are not quite enough to differentiate it from the prior art, namely Kubota. Examiner also apologizes for the delay for the response to the latest claim amendments. Respectfully, Applicant is arguing the alleged differences between what the latch failure detector outputs and receives. However, and perhaps the interpretation of the Kubota reference has changed in this regard, as noted in the rejection, this part has been resolved in the obviousness part of the rejection for the independent claims. In this obviousness part, it is noted of the similarities between the present invention and the Kubota reference. It is examiner's opinion that the alleged differences are variations that one of ordinary skill in the art would realize is being done in the Kubota reference.

While the concepts of the two seem similar, more details on how the latch failure detector works would help in overcoming the current rejection. For example, Applicant amended to include the width of latch failure non-occurrence, but noted that it was detected if it was larger than a predetermined region. Specifically, the predetermined region is a broad expression and it is clear that Kubota also makes a determination of this, hence the phase adjustment process to correct this. More details on this part of the process, so that the differences or the determination would not be an obvious one, would overcome the current rejection.

Conclusion

11.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to DENNIS P. JOSEPH whose telephone number is (571)-270-

1459. The examiner can normally be reached on Monday-Friday, 8am-5pm.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Amr Awad can be reached on 571-272-7764. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

        Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DJ

/Amr Awad/
Supervisory Patent Examiner, Art Unit 2629